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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,501	12/03/2003	Alfred Johann Peter Haszler	APV31528A	3969

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EXAMINER

MORILLO, JANEL COMBS

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/725,501	HASZLER, ALFRED	
	Examiner	Art Unit	
	Janelle Combs-Morillo	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/959,602.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>022404</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-28 and 30, drawn to aluminum alloy product, classified in class 420, subclass 541.
 - II. Claim 29, drawn to method of use for an Al-Mg product, classified in class 148, subclass 440.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a materially different process of using, such as operating at cryogenic temperatures, etc.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

2. During a telephone conversation with Anthony Venturino on April 7, 2004 a provisional election was made with traverse to prosecute the invention of group I, claims 1-28 and 30. Affirmation of this election must be made by applicant in replying to this Office action. Claim 29 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 799900 A1 (EP'900) in view of WO 95/26420 or Baumann et al (US 5,624,632).

EP'900 teaches an Al-Mg-Mn-Zn alloy suitable for welded components (page 2 line 6) with alloying ranges as set forth in the Table below (see abstract, etc.). EP'900 teaches overlapping ranges of Mg, Mn, Zn, Zr, Cr, Ti, Fe, Si, and Cu, with respect to instant independent claims 1 and 30. EP'900 does not teach the addition of Sc.

However, WO'420 teaches that the addition of Sc to Al-Mg alloys enables stronger welds and assemblies (abstract). WO'420 teaches 0.15-0.60% Sc added to said Al-Mg alloy (WO'420 page 20 lines 6 and 9). It would have been obvious to one of ordinary skill in the art to add 0.15-0.60% Sc (as taught by WO'420) to the Al-Mg-Zn-Mn alloy composition taught by EP'900

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because WO'420 teaches that said addition provides for stronger welds and assemblies (abstract).

	Mg	Mn	Zn	Zr	Cr	Ti	Fe	Si	Cu	Sc
indep. Claim 1	4.0-6.0	0.4-1.2	0.4-1.5	0.25 max.	0.3 max.	0.2 max.	0.5 max.	0.5 max.	0.4 max.	0.01-0.5
2	4.0-5.6									
3	4.6-5.6									
4			0.4-0.9							
5			0.5-0.9							
6				0.05-0.25						
7				0.05-0.20						
8				0.10-0.20						
9										0.01-0.3
10										0.1-0.5
11										0.1-0.3
12		0.4-0.6								
13		0.6-0.9								
14							0.15-0.35			
15							0.2-0.3			
16								0.07-0.25		
17								0.10-0.20		
18					0.15% max					
19									0.1% max.	
30	4.0-5.6	0.4-1.2	0.4-1.5	0.25 max.	0.3 max.	0.2 max.	0.5 max.	0.5 max.	0.4 max.	0.01-0.5
EP'900 broad	4.5-7	0.4-1.2	0.4-5.0	0.3 max.	0.3 max.	0.2 max.	0.5 max.	0.5 max.	0.4 max. Cu	
Hoffman	3.0-6.5	0.2-1.0	<1.3	<0.30	<0.15	<0.30	<0.8	0.05-0.6	<0.30	

Alternatively, Baumann teaches that the addition of 0.05-0.5% Sc can be added to Al-Mg alloys in order to improve strength and corrosion resistance (column 2 lines 46-47, 61-62). It would have been obvious to one of ordinary skill in the art to add 0.05-0.5% Sc to the Al-Mg-Zn-Mn alloy taught by EP'900 because Baumann teaches that said additions improve strength and corrosion resistance (column 2 lines 61-62).

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility.

Concerning dependent composition claims 2-19, the combination of EP'900 and WO'240 or Bauman teaches an alloy composition that overlaps the instant ranges (see above discussion and Table).

Concerning claims 20-21, EP'900 teaches that said alloy can be formed into a rolled product such as a plate (page 2 line 40). EP'900 teaches a work hardened temper or soft temper can be applied to said Al-Mg alloy (page 3 lines 47-48).

Concerning claims 23-26, the prior art does not teach the proof strength or exfoliation resistance of an Al-Mg-Zn-Mn alloy with the instant alloying ranges. However, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Because the prior art teaches substantially the same composition processed substantially as presently claimed, then substantially the same results (proof strength or exfoliation resistance) are expected to occur.

Concerning claims 22, 27, and 28, EP'900 teaches that said plate can be used in the construction of large welded structures such as vessels for marine and land transportation (page 2 lines 5-10).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

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improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-28 and 31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 6,342,113 B2 (US'113) in view of WO 95/26420 or Baumann et al (US 5,624,632).

The claims of US'113 teach an overlapping alloy useful for welded structures (such as plates or extrusions), wherein said composition consists of 5-6% Mg, 0.6-1.2% Mn, 0.4-1.5% Zn, 0.05-0.25% Zr, 0.3% max Cr, 0.2% max Ti, 0.5% max Fe, 0.5% max Si, 0.4% max Cu, and 0.4% max Ag (claim 1, etc.) Claim 2 of US'113 teaches that the temper is selected from a soft temper and a work hardened temper. US'113 does not teach the addition of Sc.

However, as stated above, the prior art of WO 95/26420 or Baumann et al (US 5,624,632) does teach said addition. Because WO'420 teaches that said addition provides for stronger welds and assemblies (abstract), or because Baumann teaches that the addition of 0.05-0.5% Sc can be added to Al-Mg alloys in order to improve strength and corrosion resistance (column 2 lines 46-47, 61-62), it would have been obvious to one of ordinary skill in the art to add Sc to the alloy taught by the claims of US'113.

Concerning dependent composition claims 2-19, the claims of US'113 teaches a composition that overlaps the instant ranges.

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Concerning claims 20-21, and 23 the claims of US'113 teaches that said alloy can be formed into a rolled product such as a plate (claims 17, 18, and 20), and a work hardened temper can be applied to said Al-Mg alloy (claim 22 of US'113), and a proof strength >140 MPa can be achieved (claim 16).

Concerning claims 24-26, the claims of US'113 do not teach the exfoliation resistance of an Al-Mg-Zn-Mn alloy with the instant alloying ranges. However, the prior art teaches substantially the same composition processed substantially as presently claimed, then substantially the same results (such as exfoliation resistance) are expected to occur.

Concerning claims 22, 27, and 28, the claims of US'113 teaches that said plate can used as a welded structure (claim 15).

7. Claims 1-28 and 31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2 and 13 of U.S. Patent No. 6,416,884 B2 (US'884) in view of WO 95/26420 or Baumann et al (US 5,624,632).

Claim 13 of US'884 teach a welded structure comprising 5-6% Mg, 0.7-1.2% Mn, 0.4-0.9% Zn, 0.05-0.3% Zr, 0.15% max Cr, 0.2% max Ti, 0.5% max Fe, 0.5% max Si, 0.25% max Cu, balance aluminum (claim 13, etc.). US'884 does not teach the addition of Sc.

However, as stated above, the prior art of WO 95/26420 or Baumann et al (US 5,624,632) or Pickens et al does teach said addition. Because WO'420 teaches that said addition provides for stronger welds and assemblies (abstract), or because Baumann teaches that the addition of 0.05-0.5% Sc can be added to Al-Mg alloys in order to improve strength and corrosion resistance (column 2 lines 46-47, 61-62), it would have been obvious to one of ordinary skill in the art to add Sc to the alloy taught by the claims of US'884.

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Concerning dependent composition claims 2-19, the claims of US'884 teaches a composition that overlaps the instant ranges.

Concerning claim 20, the claim 2 of US'884 teaches that said alloy can be formed into an extrusion, plate, or sheet.

The claims of US'884 don't mention a temper (instant claim 21), however, it is held to be within the level of one of ordinary skill in the art to apply a variety of well known tempers to said Al-Mg alloy (which is categorized as a 5xxx series, work hardened alloy), including an O temper or a work hardened temper.

Concerning claims 23-26, the claims of US'884 do not teach the exfoliation resistance or proof strength of an Al-Mg-Zn-Mn alloy with the instant alloying ranges. However, the prior art teaches substantially the same composition processed substantially as presently claimed, then substantially the same results (such as exfoliation resistance and proof strength) are expected to occur.

Concerning claims 22, 27, and 28, the claims of US'884 teaches that said plate can used as a welded structure (claim 15).

8. Claims 1-28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-36 of U.S. Patent No. 6,695,935 B1 (US'935) in view of WO 95/26420 or Baumann et al (US 5,624,632).

The claims of US'935 teach a welded structure comprising 4.0-5.6% Mg, 0.4-1.2% Mn, 0.4-1.5% Zn, 0.25% max.% Zr, 0.3% max Cr, 0.2% max Ti, 0.5% max Fe, 0.5% max Si, 0.4% max Cu, 0.01-0.1% Bi, balance aluminum (claim 1, etc.). US'884 does not teach the addition of Sc.

However, as stated above, the prior art of WO 95/26420 or Baumann et al (US 5,624,632) or Pickens et al does teach said addition. Because WO'420 teaches that said addition provides for stronger welds and assemblies (abstract), or because Baumann teaches that the addition of 0.05-0.5% Sc can be added to Al-Mg alloys in order to improve strength and corrosion resistance (column 2 lines 46-47, 61-62), it would have been obvious to one of ordinary skill in the art to add Sc to the alloy taught by the claims of US'935.

Concerning dependent composition claims 2-19, the claims of US'935 teaches a composition that overlaps the instant ranges.

Concerning instant claims 20-21, 23-26, claim 27 of US'935 teaches that said alloy can be formed into an extrusion, and a work hardened temper temper can be applied to said Al-Mg alloy (claim 7 of US'935), a proof strength >140 MPa can be achieved (claim 10 of US'935), and an exfoliation resistance substantially as claimed can be achieved (claim 8 of US'935).

Concerning claims 22, 27, and 28, the claim 30 of US'935 teaches that said plate can be used as a welded structure.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs-Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 8:30 am- 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

ROY KING 
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700


jcm

April 19, 2004